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| 10/089,196      | 06/13/2002  | Klaus Weber          | AZ.3129             | 3273             |

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EXAMINER

FOX, CHARLES A

ART UNIT PAPER NUMBER

3652

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/089,196

Applicant(s)

WEBER ET AL.

Examiner

Charles A. Fox

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada et al. In regards to claim 20 Harada et al. US 5,700,127 discloses an apparatus for loading and unloading substrates from at least 2 processing stations comprising:

a conveying device (33) for the linear transport of substrates;

at least one rotatable handling device (10) for transporting said substrates from said conveying device to said process stations;

wherein said conveying device is disposed between at least two process stations; and

said handling device is disposed above said conveying device. See figures 1-3.

In regards to claim 21 Harada et al. further disclose that said handling device is disposed upon the central axis of said conveying device.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

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subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22-24 and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. as applied to claim 20 above, and further in view of Toshima. In regards to claims 22-24,32,33 and 35 Harada et al. teach the limitations of claim 20 as above, they do not teach the substrate handling device as having multiple substrates placed upon it at the same time. Toshima US 6,007,675 teaches a handling device for substrates comprising:

- a plurality of substrate receivers, wherein said substrates are all placed along the circumference of an imaginary circle;

- wherein said receivers are uniformly spaced along said imaginary circle;

- wherein said handling device is provided with radial arms upon which the receivers are disposed on:

- wherein said process devices are also disposed along said imaginary circle;

- and said process stations are diametrically opposed to one another in relation to said imaginary circle;

- wherein a common drive system (75) is provided for securing the substrates to said process stations. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the apparatus taught by Harada et al. with the substrate handler taught by Toshima in order to allow the apparatus to handle multiple substrates at the same time thereby decreasing the cycle time for processing a batch of substrates.

In regards to claim 34 It would have been obvious to one of ordinary skill in the art, at the time of invention that the function of the process chambers can be the same or different and the apparatus will still work in the same manner. Therefore it is considered an obvious design choice to have like processing chambers in the device.

Claims 25-29,31,36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. and Toshima as applied to claim 22 above, and further in view of Lynch. Harada et al. and Toshima teach the limitations of claim 22 as above, they do not teach the conveying device as being a belt. Lynch US 4,595,440 teaches a conveyor (21) for holding and moving substrates (25) from an input position to an output position in a process machine, said conveyor comprising:

carriers (25) for holding substrates;

wherein said carriers are uniformly spaces along said conveyor belt;

said carriers being disposed along a central axis of said conveyor belt;

. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the apparatus as taught by Harada et al. with a conveyor belt as taught by Lynch in order to move the substrates sequentially between process devices in an indexed manner that is exact and easy to control.

In regards to claims 31,36 and 37 Harada et al. in view of Toshiba further teach that the receivers of said handling device correspond to a like number of process locations and transfer locations located along said imaginary circle, wherein during loading or unloading of said receivers, the receivers are positioned over the central point of either a processing or transfer station. While Harada et al. in view of Toshiba do

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not teach two carriers being positioned on the imaginary circle it would have been obvious to one of ordinary skill in the art, at the time of invention to space the carriers taught by Lynch in such a way so as have two carriers align with the imaginary circle taught by Harada et al. in view of Toshiba in order to allow all radial arms of the handler to work with every movement of the handler.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. in view of Toshiba as applied to claim 22 above, and further in view of Bacchi et al. Harada et al. in view of Toshiba teach the limitations of claim 22 as above, they do not teach providing a controller to drive the receivers. Bacchi et al. US 6,357,996 teaches a receiver (8) for a substrate that is opened and closed by a controller that receives signals from a charge-coupled device. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the device taught by Harada et al. in view of Toshiba with a control for the opening and closing of the receivers as taught by Bacchi et al. in order for the device to grasp and release the substrates at predetermined times and locations.

### ***Response to Amendment***

The amendments to the specification and claims filed on June 17, 2004 has been entered into the record. The amendments to claims 22,2331-33,35 and 36 renders the objections to those claims moot and they have been withdrawn.

### ***Allowable Subject Matter***

Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims. The closest prior art of Lynch does not teach or suggest placing two carriers in a side by side manner on the conveyor belt.

### ***Response to Arguments***

Applicant's arguments filed June 17, 2004 have been fully considered but they are not persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a separate conveyor and handler) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The conveyor section (33) does move a substrate from wafer cassettes (6) to an area where a handler moves the substrates into a process device. There is no mention of the conveyor device as being a separate entity from the handling device. Applicant is correct that the Harada reference call (33) a common conveying path" and that this path is comprised of sub-units that make up the path, the first is rails (11) and the actual conveying device (12) which rides upon said rails in a linear direction. The handling device forms the upper portion of the conveying device and as such holds the substrates as they are moved in a linear direction and then rotates to place them in the appropriate process device. The Harada reference is deemed to anticipate the limitations present in the claims.

The objection to the drawings have been withdrawn based upon applicant arguments that the opening and closing of receivers is well known in the art and that any type of device capable of performing the task would meet the limitations in the

claims. As such those limitations are herein treated as prior art admitted by the applicant.

The prior art made of record and not relied upon, but considered pertinent to applicant's disclosure is: Jacoby et al. 1985, Nogami 1988, Petz et al. 1990, Novak et al. 1993, Perego 2001, Komatsu et al. 2002 and Rodefeld 2003.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 703-605-4294. The examiner can normally be reached between 7:00-5:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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9-15-04



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